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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/616,633 | 07/09/2003 | Chong Chee Keong | 70020999-1 | 3408 |

7590 08/02/2005
AGILENT TECHNOLOGIES, INC.
Legal Department, DL429
Intellectual Property Administration
P.O. Box 7599
Loveland, CO 80537-0599

EXAMINER

LUU, THANH X

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2878

DATE MAILED: 08/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/616,633

Applicant(s)

KEONG, CHONG CHEE

Examiner

Thanh X. Luu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, "said white stripes" lacks proper antecedent basis.

Regarding claim 4, it is unclear in its given context how the first array of photodetectors is divided into a second and third array, yet the third array is offset from the first array. That is, if the first array is composed of the second and third array, how can the third array be offset from the first array or part of itself??

Regarding claim 6, "said channel signals" lacks proper antecedent basis.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 4 and 6, as understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Minami et al. (U.S. Patent 4,529,964).

Regarding claims 1, 2, 4 and 6, Minami et al. disclose (see Figs. 3 and 4) an encoder, comprising: a first array of n photodetectors (16), where $n > 2$, each

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photodetector being characterized by a width d (P); and a code strip imaging system for generating an image from a code strip (10) on the first array, the image comprising alternating dark and light stripes, the stripes having a width of D (W), the dark stripes having a lower luminosity than the light stripes, wherein $nd = (n-1)D$ (see equation 1 in col. 5; $P(N+1) = NW$ or $PN = (N-1)W$), the code strip image moving in a first direction with respect to the first array, the distances d and D being measured in a direction parallel to the first direction. Minami et al. also disclose (see Table 1, in cols. 5-6) inherent circuitry that switches between logic states (0-10) or repetitively cycles through values as claimed. The photodetectors of Minami et al. (see Fig. 9) may be grouped and designated second (first 5 elements) and third arrays (last five elements), wherein the third array is offset (opaque element between photodetectors) from the second array as claimed.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. in view of Applicant's Admitted Prior Art (Fig. 4-6).

Regarding claims 3 and 5, Minami et al. disclose the claimed invention as set forth above. Minami et al. do not specifically disclose a complementary array or offsetting the array as claimed. AAPA teach (see Fig. 4) that it is well known in the art

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to provide complementary signals to improve accuracy. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a complementary array as claimed in the apparatus of Minami et al. in view of AAPA to improve accuracy. Furthermore, choosing the type of configuration of the arrays is a matter of design choice. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to offset the array in an orthogonal direction as claimed in the apparatus of Minami et al. in view of AAPA to provide a more compact configuration.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh X. Luu whose telephone number is 571-272-2441. The examiner can normally be reached on M-F 6:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, consisting of a series of loops and a long, sweeping stroke that extends upwards and to the right.

Thanh X Luu
Primary Examiner
Art Unit 2878

08/2005